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(54) Title of Invention: At-seat betting terminal for at-seat betting system at public races

(57) Abstract

Purpose: To allow cashless and paperless purchase of bets while seated at a cycle racing track or the like, and provide all users with betting information at their seats. Constitution: An ID card or a prepaid card is inserted into a card insertion unit 4, which reads magnetic data from the ID card or prepaid card. Keys on an operation input unit 3 are used to place bets on the race. A display unit 2 displays various data

and information required for the purchase of a betting ticket, as well as live images of the race.

### Claims

1. An at-seat betting terminal for an at-seat betting system at public races or the like, which is provided at the seats of each spectator watching the races to allow at-seat purchase of bets comprising:  
a display unit for displaying a live broadcast of the race and betting price information, an operating input unit for inputting data for placing bets, and a card insertion unit into which a card is inserted to purchase bets.
2. An at-seat betting terminal for an at-seat betting system at public races or the like as recited in claim 1, wherein said display unit comprises a liquid crystal screen.
3. An at-seat betting terminal for an at-seat betting system at public races or the like as recited in claim 1, wherein said card inserted into the card insertion unit is a prepaid card for temporary members, or an ID card for long-term members.
4. An at-seat betting terminal for an at-seat betting system at public races and the like as recited in claim 1, wherein each said at-seat betting terminal is connected to a central management apparatus via electric power supply lines.

### Detailed Description of the Invention

0001

#### Field of the Invention

The present invention relates to an at-seat betting terminal for use in an at-seat betting system at public races or the like. In particular, the invention relates to an at-seat betting terminal for an at-seat betting system at public races or the like, that enables bets to be placed while the user remains seated at a special spectator's seat at the race track.

0002

#### Description of the Related Art

Public races such as cycle races in accordance with the Bicycle Racing Act, or horse races in accordance with on the Horse Racing Act are generally known in the art, and spectators are able to place bets on each race.

0003

To purchase this type of bet, a spectator enters a selection on a mark sheet, for example, proceeds to a specified counter, and purchases a betting ticket.

0004

### SUMMARY OF THE INVENTION

In the conventional betting system mentioned above, a betting ticket is issued for each race, and when each race is over, a large number of losing betting tickets are scattered around the racing stadium, spoiling the overall appearance, and necessitating a significant amount of cleaning work.

0005

The purchase of betting tickets using existing betting systems, however, is troublesome because for each race, the spectator must go to a betting counter to purchase a betting ticket, leaving his seat and returning to his seat on each occasion.

0006

In the existing systems, monitor screens are arranged at various locations around the stadium so that races can be watched indoors. However, customers find it difficult to make use of the information displayed because the monitors are designed to be viewed while standing up, and there may be insufficient monitors available.

0007

These problems of the prior art have not yet been effectively solved. What is needed is an apparatus which is able to perform processes electrically, avoiding the problems associated with the purchase of a betting ticket and the operation of placing a bet.

0008

The aim of the present invention is to solve the above-mentioned problems of the prior art and provide an at-seat betting terminal for an at-set betting system at races or the like, which permits the paperless purchase of betting tickets at the spectator's seat, and allows spectators to watch the races live on individual monitor screens.

0009

According to a first aspect of the invention, an at-seat betting terminal is provided for an at-seat betting system at public races or the like, and installed at the seats of each spectator watching the races, to allow at-seat purchase of bets, the terminal comprising a display unit for displaying a live broadcast of the public race and betting price information, an operating input unit for inputting data for placing bets, and a card insertion unit into which a card is inserted to purchase a bet.

0010

According to a second aspect of the invention, the display unit comprises a liquid crystal screen.

0011

According to a third aspect of the invention, the card inserted into the card insertion unit is a prepaid card for temporary membership, or an ID card for long-term membership.

0012

According to a fourth aspect of the invention, each at-seat betting terminal is connected to a central management apparatus via electric power supply lines.

0013

#### Operation

The first aspect of the present invention provides an at-seat betting terminal for public races or the like, which is provided at the seats of each spectator watching the races, comprising a display unit which displays information required for the purchase of a bet, an operation input unit for inputting data for placing bets, and a card insertion unit into which a card is inserted to purchase a bet, whereby the spectator is able to place bets without moving from a seat provided with the at-seat betting terminal.

0014

The second aspect of the invention provides in addition a liquid crystal display showing betting data and information and live broadcasts of the races, so that monitor information can be obtained while seated.

0015

The third aspect of the invention allows bet payment by prepaid card or a predetermined ID card, so that no losing betting tickets are created, which would otherwise spoil the appearance of the stadium. Furthermore, since not cash is needed, theft prevention at the stadium can be enhanced.

0016

The fourth aspect of the invention provides connections from the terminals to a central management apparatus via electric power supply lines, so that information transfer can be performed at low cost, owing to the economical use of wiring.

0017

Embodiment

An embodiment of the at-seat betting terminal for an at-seat betting system for races will now be described in detail, with reference to the drawings. The description below relates to the use of the terminal in a bicycle race betting ticket purchasing system for a cycle racing stadium.

0018

Fig. 1 is a perspective view of the exterior of the at-seat betting terminal 21 of this embodiment. The at-seat betting terminal 21 is installed on a table 5 at each special spectator's seat provided at a stadium. Connections are made via electric power supply lines 22 to a central management apparatus 42 which will be described below (see Fig. 2).

0019

The at-seat betting terminal 21 as shown in Fig. 1 includes a display unit 2, an operation input unit 3, and a card input unit 4.

0020

The display unit 2 consists of a small-sized colour liquid crystal display device or the like, and displays predetermined betting information or live views of the race.

0021

The operation input unit comprises a numeric key-pad or the like for the input of the race number for which a betting ticket is to be purchased, the bet number and the purchase cost etc.

0022

The card insertion unit 4 includes a card insertion opening (not shown) for receiving a magnetic card or the like, and is provided with a means for reading from or writing to the inserted card.

0023

As described below, the card inserted into the card insertion unit 4 is a pre-specified prepaid card or ID card.

0024

The at-seat betting terminal for the cycle racing stadium in accordance with this embodiment, allows a spectator who is seated at a special seat to purchase a betting ticket from his seat. The spectator occupying the special seat may have either an annual membership or day membership.

0025

A spectator having annual membership enters into an annual contract with the race organiser and carries a member's card (described below as an annual membership ID card or simply as an ID card) provided with an identifying number. He is able to pay for betting tickets and receive payments for winning bets via a specified account at a nominated bank.

0026

The annual member is able to set a daily limit on funds available for betting. Proceeds from winning wagers can be used to increase bets on subsequent races.

0027

When the ID card is used on site to access the annual member's bank account, the member's betting limit information is received by the central management apparatus

(described below as the at-seat betting central management apparatus 42) installed on site, and the balance of available funds is automatically increased or decreased by a processing operation within the central management apparatus.

0028

An annual membership ID card in the form of a magnetic card may include the following magnetic data information:

- (a) ID card number
- (b) Annual membership/day membership identification code
- (c) Annual membership number
- (d) Date of the event
- (e) Balance of the member's nominated bank account
- (f) ID card secret code

0029

This magnetic data information enables an annual member to be identified, bets to be purchased and paid out in a cashless and paperless manner. If required, cash payments can also be made in accordance with the balance at the settlement time.

0030

Meanwhile, a day member who has entered the stadium and is seated at a special spectator seat purchases a prepaid card for a predetermined amount of money. The prepaid card (described hereafter as day membership prepaid card, or simply as a prepaid card) consists of a magnetic card which is valid for the day, and which can only be used for placing bets and receiving payments. By purchasing the prepaid card, the day member is registered, and can purchase betting tickets or receive payments.

0031

The betting limit for the day member is initially limited to the purchased funds on the prepaid card. Whenever payments are made on winning bets, the winning amount is automatically added, and the increased amount is available for betting on subsequent races.

0032

A day membership prepaid card in the form of a magnetic card may include the following magnetic data information:

- (a) Prepaid card number
- (b) Annual membership/day membership identification code
- (c) Day membership number
- (d) Date of the event
- (e) Cash balance of the prepaid card
- (f) Prepaid card secret code

0033

This magnetic data information enables a day member to be identified, bets to be purchased and paid in a cashless and paperless manner, and cash payments to be made in accordance with the balance at a settlement time.

0034

The above descriptions relate to an at-seat terminal 21, an annual membership ID card for use in the terminal, and a day membership prepaid card for use in the terminal, in accordance with an embodiment of the invention. The overall structure of an at-seat betting system in which the terminal is used will now be described with reference to Fig.2.

0035

The at-seat betting system comprises a pre-paid card issuing section 10, a special spectator seating section 20 and a central controller 40.

0036

The prepaid card issuing section 10 is provided near to the entrance to the racing stadium, and includes a plurality of prepaid card issuing terminals 11.

0037

The special spectator seating section 20 comprises a large number of at-seat betting terminals 21 arranged in groups of two, and a plurality of bet payment terminals 31.

0038

The central controller 40 comprises a totalizator system 41 for totalling betting data and processing winning payments, and an at-seat betting central management apparatus 42.

0039

The prepaid card issuing terminals 11, at-seat betting terminals 21, and bet payment terminals 31 are connected respectively to common electric supply lines 12, 22, 32 in a multidrop configuration. In order for the power supply lines 12, 22, 32 to function as transmission and reception media for power line communication, the system is provided with power supply signalling modems 13, 23, 33, and data multiplexers 14, 24, 34 for multiplexing or decoding data signals and video signals. Communication lines 51, 52 are connected respectively between the data multiplexers 14, 24, 34 and the at-seat betting central management apparatus 42, and between the at-seat betting central management apparatus 42 and the totalizator system 41.

0040

A video signal 53 from a video camera for live broadcast of the race is input to the data multiplexers 24 of the at-seat betting terminals 21.

0041

The at-seat betting central management apparatus 42 is connected to an existing bank network system 55 to allow payments to or from an annual member's nominated bank account. The at-seat betting central management apparatus 42 is provided with a means of communicating with the power supply signalling modems 13, 23, 33 via the data multiplexers 14, 24, 34 using a polling-selecting system.

0042

The data information that is output from the totalizator system 41 is input to the at-seat betting central management apparatus 42, which transmits card issuing data signals to the prepaid card issuing terminals 11, betting data signals to the at-seat betting terminals 21, and data signals required for bet payments to the bet payment terminals 31. The above description relates to the overall structure of the at-seat betting system in which the at-seat betting terminal 21 of this embodiment of the invention is used. The electrical configuration of the at-seat betting terminal 21 will now be described with reference to Fig. 3, some parts of which have also been mentioned in the description of Fig. 1.

0043

As already described, the at-seat betting terminal 21 allows an annual member having an ID card or a day member who has purchased a prepaid card to use the ID card or prepaid card to place bets.

0044

Fig. 3 shows the at-seat betting terminal 21 comprising a CPU 21a for integrated control of the operation of the entire terminal; a card insertion unit 4 which is connected to a bus 21b of the CPU 21a for reading from or writing to an ID card or prepaid card; an operation input unit 3 arranged centrally on a table and consisting of a keyboard 21 for inputting betting data; and a display unit using a small-sized colour liquid crystal screen to display various data in addition to video images based on the

video signal 53. A RAM 21f, a ROM 21g and a communication controller 21h are connected to the bus 21b. A connection is made to the power supply line 22 via the communication controller 21h.

0045

The card insertion unit 2 reads the magnetic data stored on an annual member's ID card or a day member's prepaid card.

0046

The operation input unit 3 allows bets to be placed very simply using the keys arranged on the keyboard 21d to select 'to win' bets, accumulators or other bet types.

0047

The display unit 2 is adapted to display betting information including betting odds, and to show the live broadcast of the races by means of the video signal 53.

0048

The RAM 21f stores data that need to be rewritten for various processing operations.

0049

The ROM 21f stores fixed operation or control data for the processing operations, and control programs for the CPU 21a.

0050

The above description relates to the electrical configuration of the at-seat betting terminal 21. The basic operation of the terminal will now be described in accordance with the flow diagram shown in Fig. 4.

0051

An annual member or a day member takes a seat at the at-seat betting terminal 21 and places his ID card or prepaid card into the card insertion unit 4 (step 401). The card insertion unit 4 automatically reads the magnetic data from the ID card or prepaid card (step 402), the magnetic data are transmitted to the at-seat betting central management apparatus 42 (step 403), and the transmission data are displayed on the display unit 2 (step 404).

0052

The at-seat betting central management apparatus accesses the annual member's nominated bank account via the bank network system 55, as already described, and receives information relating to the bank balance etc.

0053

The at-seat betting central management apparatus 42 then waits for a betting permission confirmation (step 405). The bet is placed by the annual or day member using the at-seat betting terminal 21 (step 406).

0054

This is performed, for example, by pressing keys on the operation input unit 3, and the details of the bet are indicated on the display unit 2 (step 407). When the operator confirms that the details of the bet are correct (step 408), the bet data are transmitted to the at-seat betting central management apparatus 42, and to the totalizator system 41, whereby the bet data are registered in the at-seat betting central management apparatus 42 and in the totalizator system 41 (step 409).

0055

When each race is finished, the betting data for each race is registered in the at-seat betting central management apparatus 42. When all the day's races are finished, payment data based on the day's betting results for the annual members are output to the bank network system 55.

0056

The above description relates to the process for the purchase of a bicycle race betting ticket. The account settlement process following the end of the race will now be described.

0057

When a race finishes, the winning amounts for that race are determined at the totalizator system 41.

0058

A day member who has placed a bet using a prepaid card inserts the card into a card insertion unit (not shown) of a bet payment terminal 31, which communicates with the at-seat betting central management apparatus 42, and pays out the winning sum.

0059

For those who have placed bets using an ID card, the person's bank balance is increased or decreased via the bank network system 55, based on the betting results that are registered in the central management apparatus 42.

0060

It is also possible for payments to be made using an ID card. In this case, the remaining balance information after the payment has been made is output to the bank network system 55.

0061

In the above-described embodiment, the communication system used in the prepaid card issuing terminals 11, the at-seat betting terminals 21, and the bet payment terminals 31 employs an electric power line communication technique whereby the electric power supply lines 12, 22, 32 that are used to for the power supply are also used as signal transmitting and receiving media. Although this system saves on wiring, the invention is not necessarily restricted to the use of electric power line communication, and a communication system based on conventional wiring may be employed.

0062

#### Effect of the Invention

As described above, the first aspect of the present invention provides an at-seat betting terminal at the seat of each spectator watching a race or the like. The terminal comprises a display unit for displaying the necessary information for the purchase of a bet, an operation input unit for inputting data for placing a bet, and a card insertion unit into which a card is inserted to place a bet. The spectator is therefore able to place bets without moving from a seat that is provided with the at-seat betting terminal.

0063

The second aspect of the invention provides a colour liquid crystal screen which displays the data necessary for placing bets, and shows live broadcasts of the races. The user is therefore able to obtain monitor information while seated.

0064

The third aspect of the invention allows bets to be purchased by prepaid card or a predetermined ID card, thus eliminating the creation of any losing betting tickets which would otherwise spoil the appearance of the racing stadium. Moreover, since it is not necessary to carry cash, theft prevention at the stadium can be enhanced.

0065

The fourth aspect of the invention provides connections from the terminals to the central management apparatus via electric power supply lines, so that information can be transferred at low cost owing to the economical use of wiring.



### Brief Description of the Drawings

Fig. 1 is a perspective view of the general structure of the at-seat betting terminal in accordance with an embodiment of the present invention.

Fig. 2 is a block diagram of the overall structure of an at-seat betting system for a bicycle racing stadium, which makes use of the at-seat betting terminal of Fig. 1.

Fig. 3 is a block diagram of the detailed electrical configuration of the at-seat betting terminal of Fig. 1.

Fig. 4 is a flow diagram representing the bet-placing processes of the at-seat betting terminal.

### Drawing references

2	Display unit
3	Operation input unit
4	Card insertion unit
10	Prepaid card issuing section
11	Prepaid card issuing terminal
12, 22, 32	Electric power supply line
13, 23, 33	Power supply signalling modem
14, 24, 34	Data multiplexer
20	Special spectator seating section
21	At-seat betting terminal
21a	CPU
21b	Bus
21d	Keyboard
21f	RAM
21g	ROM
21h	Communication controller
31	Bet payment terminal
40	Central controller
41	Totalizator system
42	At-seat betting central management apparatus
51, 52	Communication line
53	Video signal
54	Betting data signal
55	Bank network system

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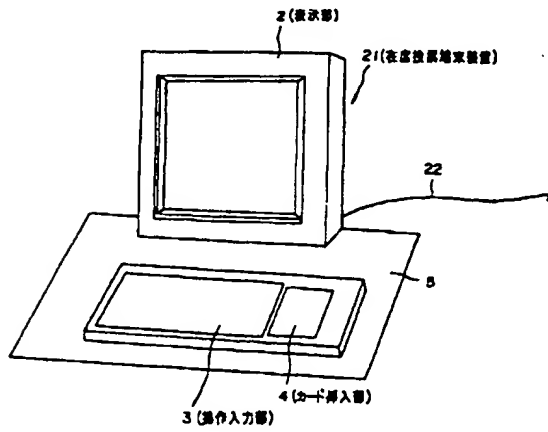
### Translation of References in Fig. 4

#### START

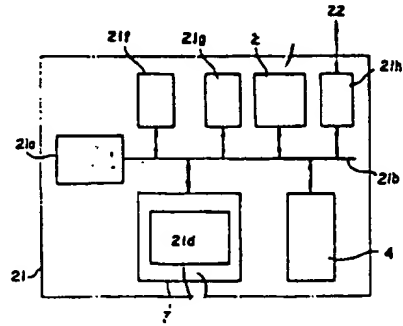
- 401 Is a card inserted?
- 402 Read magnetic data
- 403 Transmit magnetic data
- 404 Display data
- 405 Is betting permission confirmed?
- 406 Place bet
- 407 Display bet details
- 408 Are details of bet confirmed?

409 Register betting data  
END

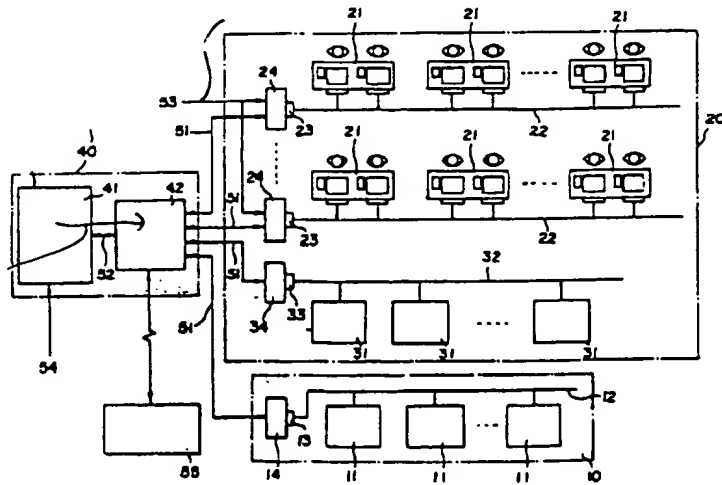
【図1】



【図3】



【図2】



【図4】

